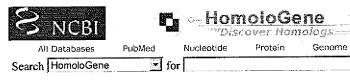
EXHIBIT C:

MULTISPECIES COMPARISON OF MO25 POLYPEPTIDE



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Limits	Preview/Index	History	Clipboa	ırd	Details	
Display	Alignment Scores	5	Show	20	Send	to 👺
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1: HomoloGene:69212. Gene conserved in Eukaryota

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Pairwise Alignment Scores

Gene			Identity (%)		Substitution Rates ¹		
Species	Symbol	Protein	DNA	d	d _N /d _S	d _{NR} /d _{NC}	
Homo sapiens	CAB39				······		
vs. Pan troglodytes	CAB39	100.0	99.9	0.001	0	0	Blast
vs. Canis lupus familiaris	CAB39	99.4	94.8	0.054	0	0	Blast
vs. Bos taurus	CAB39	100.0	94.0	0.062	0	0 .	Blast
vs. Mus musculus	Cab39	98.8	92.4	0.080	0 -	0	Blast
vs. Rattus norvegicus	Cab39	99.4	92.6	0.078	0	0	Blast
vs. Danio rerio	cab39	93.0	79.6	0.239	0	0	Blast
vs. Drosophila melanogaster	Mo25	71.9	63.8	0.494	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP000812	72.6	64.1	0.489	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP011060	73.3	64.8	0.476	0	0	Blast
vs. Caenorhabditis elegans	mop-25.1	65.3	61.7	0.537	0	0	Blast
vs. Caenorhabditis elegans	mop-25.2	61.2	60.5	0.561	0	0	Blast
vs. Schizosaccharomyces pombe	pmo25	51.7	55.7	0.669	0	0	Blast
vs. Arabidopsis thaliana	AT4G17270	44.7	52.4	0.756	0	0	Blast
vs. Arabidopsis thaliana	AT5G47540	43.5	52.5	0.753	0	0	₿íast
vs. Oryza sativa	Os07g0585100	47.0	54.1	0.711	0	0	Blast
Pan troglodytes	CAB39						
vs. Homo sapiens	CAB39	100.0	99.9	0.001	0	0	Blast
vs. Canis lupus familiaris	CAB39	99.4	94.8	0.054	0	0	Blast
vs. Bos taurus	CAB39	100.0	93.9	0.063	0	0	Blast
vs. Mus musculus	Cab39	98.8	92.3	0.081	0	0	Blast
vs. Rattus norvegicus	Cab39	99.4	92.5	0.079	0	0	Blast
vs. Danio rerio	cab39	93.0	79.6	0.239	0	0	Blast
vs. Drosophila melanogaster	Mo25	71.9	63.8	0.494	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP000812	72.6	64.1	0.489	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP011060	73.3	64.8	0.476	0	0	Blast
vs. Caenorhabditis elegans	mop-25.1	65.3	61.7	0.537	0	0	Blast
vs. Caenorhabditis elegans	mop-25.2	61.2	60.5	0.561	0	0	Blast
vs. Schizosaccharomyces pombe	pmo25	51.7	55.6	0.672	0	0	Blast
vs. Arabidopsis thaliana	AT4G17270	44.7	52.4	0.756	0	0	Blast
vs. Arabidopsis thaliana	AT5G47540	43.5	52.5	0.753	0	0	Blast
vs. Oryza sativa	Os07g0585100	47.0	54.1	0.711	0	0	Blast
Canis lupus familiaris	CAB39						
vs. Homo sapiens	CAB39	99.4	94.8	0.054	0	0	Blast
vs. Pan troglodytes	CAB39	99.4	94.8	0.054	0	0	Blast
vs. Bos taurus	CAB39	99.4	93.5	0.067	0	0	Blast
vs. Mus musculus	Cab39	98.8	91.2	0.094	0	0	Blast

vs. Rattus norvegicus	Cab39	99.4	91.4	0.091	0	0		Blast
vs. Danio rerio	cab39	93.0	79.6	0.239	0	0		Blast
vs. Drosophila melanogaster	Mo25	72.5	64.5	0.480	0	0		Blast
vs. Anopheles gambiae	AgaP_AGAP000812	72.9	64.5	0.482	0	0		Blast
vs. Anopheles gambiae	AgaP_AGAP011060	73.6	64.9	0.474	0	0		Blast
vs. Caenorhabditis elegans	mop-25.1	65.3	61.1	0.549	0	0		Biast
vs. Caenorhabditis elegans	mop-25.2	60.9	60.3	0.565	0	0		Blast
vs. Schizosaccharomyces pombe	pmo25	51.7	54.5	0.700	0	0		Blast
vs. Arabidopsis thaliana	AT4G17270	44.7	52.1	0.764	0	0		Blast
vs. Arabidopsis thaliana	AT5G47540	43.5	52.1	0.764	0	0		Blast
vs. Oryza sativa	Os07g0585100	47.0	54.1	0.711	0	0		Blast
Bos taurus	CAB39							
vs. Homo sapiens	CAB39	100.0	94.0	0.062	0	. 0		Biast
vs. Pan troglodytes	CAB39	100.0	93.9	0.063	0	0		Blast
vs. Canis lupus familiaris	CAB39	99.4	93.5	0.067	0	0		Blast
vs. Mus musculus	Cab39	98.8	91.6	0.089	0	0	•	Blast
vs. Rattus norvegicus	Cab39	99.4	92.0	0.085	0	. 0		Blast
vs. Danio rerio	cab39	93.0	79.4	0.241	0	0		Blast
vs. Drosophila melanogaster	Mo25	71.9	65.7	0.458	0	. 0		Blast
vs. Anopheles gambiae	AgaP_AGAP000812	72.6	65.4	0.465	0	0		Blast
vs. Anopheles gambiae	AgaP_AGAP011060	73.3	66.2	0.450	0	0		Blast
vs. Caenorhabditis elegans	mop-25.1	65.3	61.7	0.537	0	0		Blast
vs. Caenorhabditis elegans	mop-25.2	61.2	60.6	0.559	0	0	•	Blast
vs. Schizosaccharomyces pombe	pmo25	51.7	53.8	0.718	0	0		Blast
vs. Arabidopsis thaliana	AT4G17270	44.7	52.1	0.764	0	0		Blast
vs. Arabidopsis thaliana	AT5G47540	43.5	52.5	0.753	0	0		Blast
vs. Oryza sativa	Os07g0585100	47.0	54.5	0.701	0	0		Blast
Mus musculus	Cab39							
vs. Homo sapiens	CAB39	98.8	92.4	0.080	0	0		Blast
vs. Pan troglodytes	CAB39	98.8	92.3	0.081	0	0	· ·	Blast
vs. Canis lupus familiaris	CAB39	98.8	91.2	0.094	0	0		Blast
vs. Bos taurus	CAB39	98.8	91.6	0.089	0	0		Blast
vs. Rattus norvegicus	Cab39	99.4	96.4	0.037	0	0		Blast
ys. Danio rerio	çab39	92.4	80.4	0.227	0	0		Blast
vs. Drosophila melanogaster	Mo25	72.2	66.5	0.445	0	0		Blast
vs. Anopheles gambiae	AgaP_AGAP000812	72.9	66.4	0.446	0	0		Blast
vs. Anopheles gambiae	AgaP_AGAP011060	72.6	66.6	0.443	0	0		Blast
vs. Caenorhabditis elegans	mop-25.1	64.3	61.4	0.543	0	0		Blast
vs. Caenorhabditis elegans	mop-25.2	61.2	59.6	0.580	0	0		Blast
vs. Schizosaccharomyces pombe	pmo25	51.7	54.0	0.713	0	. 0		Blast
vs. Arabidopsis thaliana	AT4G17270	45.0	53.1	0.737	0	0		Blast
vs. Arabidopsis thaliana	AT5G47540	43.5	51.7	0.775	0	0		Blast
vs. Oryza sativa	Os07g0585100	47.0	53.9	0.716	0	0		Blast
Rattus norvegicus	Cab39							
vs. Homo sapiens	CAB39	99.4	92.6	0.078	0	0		Blast
vs. Pan troglodytes	CAB39	99.4	92.5	0.079	0	0		Blast
vs. Canis lupus familiaris	CAB39	99.4	91.4	0.091	0	0	•	Blast
vs. Bos taurus	CAB39	99.4	92.0	0.085	0	0		Blast
vs. Mus musculus	Cab39	99.4	96.4	0.037	0	0		Blast
vs. Danio rerio	cab39	93.0	80.0	0.233	0	O		Blast
vs. Drosophila melanogaster	Mo25	72.2	65.7	0.458	0	0		Blast
vs. Anopheles gambiae	AgaP_AGAP000812	72.9	66.0	0.454	0	0		Blast
- and a supply and a particular								

vs. Anopheles gambiae	AgaP_AGAP011060	72.6	65.9	0.455	0	0		Blast
vs. Caenorhabditis elegans	mop-25.1	64.3	61.2	0.547	0	0		Blast
vs. Caenorhabditis elegans	mop-25.2	61.2	59.8	0.576	0	. 0		Blasi
vs. Schizosaccharomyces pombe	pmo25	51.7	53.7	0.720	0	Ó		Blast
vs. Arabidopsis thaliana	AT4G17270	44.7	52.2	0.761	0	0		Blast
vs. Arabidopsis thaliana	AT5G47540	43.5	51.5	0.781	0	0		Blast
vs. Oryza sativa	Os07g0585100	47.0	54.2	0.708	0	0		Blast
Danio rerio	cab39							
vs. Homo sapiens	CAB39	93.0	79.6	0.239	0	0		Blast
vs. Pan troglodytes	CAB39	93.0	79.6	0.239	0	0		Blast
vs. Canis lupus familiaris	CAB39	93.0	79.6	0.239	0	0		Blast
vs. Bos taurus	CAB39	93.0	79.4	0.241	0	0		Blast
vs. Mus musculus	Cab39	92.4	80.4	0.227	0	0		Blast
vs. Rattus norvegicus	Cab39	93.0	80.0	0.233	0	0		Blast
vs. Drosophila melanogaster	Mo25	69.5	68.8	0.404	0	0		Blast
vs. Anophetes gambiae	AgaP_AGAP000812	70. 9	69.4	0.393	0	0		Blast
vs. Anopheles gambiae	AgaP_AGAP011060	70.6	67.8	0.421	0	0		Blast
vs. Caenorhabditis elegans	mop-25.1	63.8	62.1	0.529	0	O		Blast
vs. Caenorhabditis elegans	mop-25.2	60. 9	61.1	0.548	0	0		Blast
vs. Schizosaccharomyces pombe	pmo25	51.7	52.5	0.753	0	O		Blast
vs. Arabidopsis thaliana	AT4G17270	45.3	53.2	0.734	0	0		Blast
vs. Arabidopsis thaliana	AT5G47540	43.8	52.1	0.764	0	0		Blast
vs. Oryza sativa	Os07g0585100	47.0	53.7	0.722	0	0		Blast
Drosophila melanogaster	Mo25							
vs. Homo sapiens	CAB39	71.9	63.8	0.494	0	0		Blast
vs. Pan troglodytes	CAB39	71.9	63.8	0.494	0	0		Blast
vs. Canis lupus familiaris	CAB39	72.5	64.5	0.480	0	0		Blast
vs. Bos taurus	CAB39	71.9	65.7	0.458	0	0		Blast
vs. Mus musculus	Cab39	72,2	66.5	0.445	0	0		Blast
vs. Rattus norvegicus	Cab39	72.2	65.7	0.458	0	0		Blast
vs. Danio rerio	cab39	69.5	68.8	0.404	0	0	·	Blast
vs. Anopheles gambiae	AgaP_AGAP000812	88.7	82.2	0.203	0	0		Blast
vs. Anopheles gambiae	AgaP_AGAP011060	86.4	82.5	0.199	0	0		Blast
vs. Caenorhabditis elegans	mop-25.1	65.8	64.3	0.485	0	0		Blast
vs. Caenorhabditis elegans	mop-25.2	63.5	59.8	0.576	0	0		Blast
vs. Schizosaccharomyces pombe	pmo25	52.1	51.1	0.791	0	0		Blast
vs. Arabidopsis thaliana	AT4G17270	42.4	51.3	0.785	0	0		Blast
vs. Arabidopsis thaliana	AT5G47640	42.1	50.2	0.818	0	0		Blast
vs. Oryza sativa	Os07g0585100	46.2	52.3	0.758	0	0		Blast
Anopheles gambiae	AgaP_AGAP000812	2						
vs. Homo sapiens	CAB39	72.6	64.1	0.489	0	0		Blast
vs. Pan troglodytes	CAB39	72.6	64.1	0.489	0	0		Blast
vs. Canis lupus familiaris	CAB39	72.9	64.5	0.482	0	0 -		Blast
vs. Bos taurus	CAB39	72.6	65.4	0.465	0	O		Blast
vs. Mus musculus	Cab39	72.9	66.4	0.446	0	0		Blast
vs. Rattus norvegicus	Cab39	72.9	66.0	0.454	0	0		Blast
vs. Danio rerio	cab39	70.9	69.4	0.393	0	0		Blast
vs. Drosophila melanogaster	Mo25	88.7	82.2	0.203	0	0		Blast
vs. Anopheles gambiae	AgaP_AGAP011060	93.7	90.7	0.100	0	0		Blast
vs. Caenornabditis elegans	mop-25.1	66.2	64.9	0.474	0	0		Blast
vs. Caenomabditis elegans	mop-25.2	62.0	61.8	0.534	0	0		Blast
vs. Schizosaccharomyces pombe	pmo25	50.9	50.1	0.821	0	0		Blast
the former or section of the fraction	•							

vs. Arabidopsis thaliana	AT4G17270	43.1	51.1	0.793	0	0	Blast
vs. Arabidopsis thaliana	AT5G47540	43.3	49.8	0.830	0	0	Blast
vs. Oryza sativa	Os07g0585100	46.0	51.6	0.776	0	0	Blast
Anopheles gambiae	AgaP_AGAP011060						
vs. Homo sapiens	CAB39	73.3	64.8	0.476	0	0	Blast
vs. Pan troglodytes	CAB39	73.3	64.8	0.476	0	0	Blast
vs. Canis lupus familiaris	ÇAB39	73.6	64.9	0.474	0	0	Blast
vs. Bos taurus	CAB39	73.3	66.2	0.450	0	0	Blast
vs. Mus musculus	Cab39	72.6	66.6	0.443	0	0	Blast
vs. Rattus norvegicus	Cab39	72.6	65.9	0.455	0	0	Blast
vs. Danio rerio	cab39	70.6	67.8	0.421	0	0	Blast
vs. Drosophila melanogaster	Mo25	86.4	82.5	0.199	0	0	Blast
vs. Anophetes gambiae	AgaP_AGAP000812	93.7	90.7	0.100	0	0	Blast
vs. Caenorhabditis elegans	mop-25.1	63.5	65.4	0.464	. 0	0	Blast
vs. Caenorhabditis elegans	mop-25.2	60.5	60.5	0.561	0	0	Blast
vs. Schizosaccharomyces pombe	pmo25	50.6	50.0	0.824	0	0	Blast
vs. Arabidopsis thaliana	AT4G17270	43.1	50.6	0.807	0 -	0	Blast
vs. Arabidopsis thaliana	AT5G47540	42.9	48.5	0.869	0	0 .	Blast
vs. Oryza sativa	Os07g0585100	44.8	50.8	0.800	0	0	Blast
Caenorhabditis elegans	mop-25.1						
vs. Homo sapiens	CAB39	65.3	61.7	0.537	0	0	Blast
vs. Pan troglodytes	ÇAB39	65.3	61.7	0.537	0	0	Blast
vs. Canis lupus familiaris	CAB39	65.3	61.1	0.549	0	0	Blast
vs. Bos taurus	CAB39	65.3	61.7	0.537	0	0	Blast
vs. Mus musculus	Cab39	64.3	61.4 ·	0.543	0	0	Blast
vs. Rattus norvegicus	Cab39	64.3	61.2	0.547	0	0	Blast
vs. Danio rerio	cab39	63.8	62.1	0.529	0	0 .	Blast
vs. Drosophila melanogaster	Mo25	65.8	64.3	0.485	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP000812	66.2	64.9	0.474	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP011060	63.5	65.4	0.464	0	0	Blast
vs. Caenorhabditis elegans	mop-25.2	72.1	66.2	0.450	0	0	Blast
vs. Schizosaccharomyces pombe	pmo25	51.7	53.3	0.731	0	0	Blast
vs. Arabidopsis thaliana	AT4G17270	45.5	50.8	0.800	0	0	Blast
vs. Arabidopsis thaliana	AT5G47540	46.5	50.1	0.822	0	0	Blast
vs. Oryza sativa	Os07g0585100	48.5	52.7	0.747	0	0	Blast
Caenorhabditis elegans	mop-25.2						
vs. Homo sapiens	CAB39	61.2	60.5	0.561	0	0	Blast
vs. Pan troglodytes	CAB39	61.2	60.5	0.561	0	0	Blast
vs. Canis lupus familiaris	CAB39	60.9	60.3	0.565	0	0	Blast
vs. Bos taurus	CAB39	61.2	60.6	0.559	0	0	Blast
vs. Mus musculus	Cab39	61.2	59.6	0.580	0	0	Blast
vs. Rattus norvegicus	Cab39	61.2	59.8	0.576	0	0	Blast
vs. Danio rerio	cab39	60.9	61.1	0.548	0	0	Blast
vs. Drosophila melanogaster	Mo25	63.5	59.8	0.576	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP000812	62.0	61.8	0.534	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP011060	60.5	60.5	0.561	0	0	Blast
vs. Caenomabditis elegans	mop-25.1	72.1	66.2	0.450	0	0	Blast
vs. Schizosaccharomyces pombe	pmo25	48.8	52.0	0.765	0	0	Blast
vs. Arabidopsis thaliana	AT4G17270	42.9	49.5	0.839	0	0	Blast
vs. Arabidopsis thaliana	AT5G47540	42.2	49.9	0.827	0	0	Blast
vs. Oryza sativa	Os07g0585100	45.5	51.2	0.789	0	0	Blast
Schizosaccharomyces pombe	pmo25					-	
_ ·							

vs. Homo sapiens	CAB39	51.7	55.7	0.669	0	0	Blast
vs. Pan troglodytes	CAB39	51.7	55.6	0.672	0	0	Blast
vs. Canis lupus familiaris	CAB39	51.7	54.5	0.700	0	0	Blast
vs. Bos taurus	CAB39	51.7	53.8	0.718	0	0	Blast
vs. Mus musculus	Cab39	51.7	54.0	0.713	0	0 .	Blast
vs. Rattus norvegicus	Cab39	51.7	53.7	0.720	0	0	Blast
vs. Danio rerio	cab39	51.7	52.5	0.753	0	0	Blast
vs. Drosophila melanogaster	Mo25	52.1	51.1	0.791	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP000812	50. 9	50.1	0.821	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP011060	50.6	50.0	0.824	0	0	Blast
vs. Caenorhabditis elegans	mop-25.1	51.7	53.3	0.731	0	0	Blast
vs. Caenorhabditis elegans	mop-25.2	48.8	52.0	0.765	0	0	Blast
vs. Arabidopsis thaliana	AT4G17270	39.9	51.0	0.794	0	0	Blast
vs. Arabidopsis thaliana	AT5G47540	40.4	50.3	0.816	0	0	Blast
vs. Oryza sativa	Os07g0585100	43.0	51.4	0.782	0	0	Blast
Arabidopsis thaliana	AT4G17270						
vs. Homo sapiens	CAB39	44.7	52.4	0.756	0	0	Blast
vs. Pan troglodytes	CAB39	44.7	52.4	0.756	0	0	Blast
vs. Canis lupus familiaris	CAB39	44.7	52.1	0.764	0	0	Blast
vs. Bos taurus	CAB39	44.7	52.1	0.764	0	0	Blast
vs. Mus musculus	Cab39	45.0	53.1	0.737	0	0	Blast
vs. Rattus norvegicus	Cab39	44.7	52.2	0.761	0	0	Blast
vs. Danio rerio	cab39	45.3	53.2	0.734	0	0	Blast
vs. Drosophila melanogaster	Mo25	42.4	51.3	0.785	0	O	Blast
vs. Anopheles gambiae	AgaP_AGAP000812	43.1	51.1	0.793	0	. 0	Blast
vs. Anopheles gambiae	AgaP_AGAP011060	43.1	50.6	0.807	0	0	Blast
vs. Caenomabditis elegans	mop-25.1	45.5	50.8	0.800	0	0	Blast
vs. Caenorhabditis elegans	mop-25.2	42.9	49.5	0.839	0	0	Blast
vs. Schizosaccharomyces pombe	pmo25	39.9	51.0	0.794	0	0	Blast
vs. Arabidopsis thaliana	AT5G47540	87.2	85.4	0.162	0	0	Blast
vs. Oryza sativa	Os07g0585100	70.8	70.5	0.374	0	0	Blast
Arabidopsis thaliana	AT5G47540						
vs. Homo sapiens	CAB39	43.5	52.5	0.753	0	0	Blast
vs. Pan troglodytes	CAB39	43.5	52.5	0.753	0	0	Blast
vs. Canis lupus familiaris	CAB39	43.5	52.1	0.764	0	0	Blast
vs. Bos taurus	CAB39	43.5	52.5	0.753	0	0	Blast
vs. Mus musculus	Cab39	43.5	51.7	0.775	0	0	Blast
vs. Rattus norvegicus	Cab39	43.5	51.5	0.781	0	0	Blast
vs. Danio rerio	cab39	43.8	52.1	0.764	0	0 .	Blast
vs. Drosophila melanogaster	Mo25	42,1	50.2	0.818	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP000812	43.3	49.8	0.830	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP011060	42.9	48.5	0.869	0	0	Blast
vs. Caenorhabditis elegans	mop-25.1	46.5	50.1	0.822	0	0	Blast
vs. Caenorhabditis elegans	mop-25.2	42.2	49.9	0.827	0	0	Blast
vs. Schizosaccharomyces pombe	pmo25	40.4	50.3	0.816	0	0	Blast
vs. Arabidopsis thaliana	AT4G17270	87.2	85.4	0.162	0	0	Blast
vs. Oryza sativa	Os07g0585100	76.5	72.1	0.349	0	0	Blast
Oryza sativa	Os07g0585100						
vs. Homo sapiens	CAB39	47.0	54.1	0.711	0	0	Blast
vs. Homo sapiens vs. Pan troglodytes	CAB39	47.0	54.1	0.711	. 0	0	Blast
vs. Pan trogrodytes vs. Canis lupus familiaris	CAB39	47.0	54.1	0.711	0	0	Blast
·	CAB39	47.0	54.5	0.701	0	0	Blast
vs. Bos taurus	OUD09	71.0	07.0	001	•	-	

vs. Mus musculus	Cab39	47.0	53.9	0.716	0	0	Blast
vs. Rattus norvegicus	Cab39	47.0	54.2	0.708	0	0	Blast
vs. Danio rerio	cab39	47.0	53.7	0.722	0	0	Blast
vs. Drosophila metanogaster	Mo25	46.2	52.3	0.758	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP000812	46.0	51.6	0.776	0	0	Blast
vs. Anopheles gambiae	AgaP_AGAP011060	44.8	50.8	0.800	0	0	Blast
vs. Caenorhabditis elegans	mop-25.1	48.5	52.7	0.747	0	0	Blast
vs. Caenorhabditis elegans	mop-25.2	45.5	51.2	0.789	0	0	Blast
vs. Schizosaccharomyces pombe	pmo25	43.0	51.4	0.782	0	0	Blast
vs. Arabidopsis thaliana	AT4G17270	70.8	70.5	0.374	0	0	Blast
vs. Arabidopsis thaliana	AT5G47540	76.5	72.1	0.349	0	0	Blast

We present three rates for nucleotide substitutions per site, as defined below:

- d: the number of nucleotide substitutions per site, corrected for multiple substitutions using the method of Jukes and Cantor (1969).
- d_N/d_S: the ratio of the rate of nonsynonymous substitutions (d_N) to the rate of synonymous substitutions(d_S), calculated using the method of
- Nei and Gojobon (1986). A high value of this metric indicates adaptive selection, whereas a low value indicates purifying selection.

 d_{NR}/d_{NC}: the ratio of radical nonsynonymous substitutions (d_{NR}) to conservative nonsynonymous substitutions (d_{NC}), calculated using the method of Hughes et al. (1990). This metric is analogous to $d_{N}/d_{S_{1}}$ but it has the advantage of being useful for studying the evolution of sequences that diverged in the distant past.

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